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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,879	03/23/2005	Vladimir Ivanovich Gavrilov	ZAOIN.P1	8745
28752	7590	01/20/2006	EXAMINER	
LACKENBACH SIEGEL, LLP LACKENBACH SIEGEL BUILDING 1 CHASE ROAD SCARSDALE, NY 10583			MARTINEZ, JOSEPH P	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/528,879

Applicant(s)

GAVRILOV ET AL.

Examiner

Joseph P. Martinez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-6, 8-10 and 13-21 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Tonar et al. (5888431).

Re claim 1, Tonar et al. teaches for example, a method for producing an electrochromic device comprising at least two electrodes (col. 2, ln. 62-63) at least one of them is optically transparent (col. 3, ln. 2-6), and a tightly closed space between the electrodes (col. 2, ln. 58-60) is filled with an electrochromic composition (col. 2, ln. 58 and col. 3, ln. 12-14), characterized in that: the initial electrochromic composition is prepared in the form of an electrochromic disperse system including, at least, a suspension and/or a colloid (col. 7, ln. 7-10), wherein a dispersion medium is an electrochromic solution comprising a liquid solvent (col. 9, ln. 14-27), a cathodic component and an anodic component (col. 6, ln. 65-67), and a disperse phase is a finely dispersed polymer (col. 7, ln. 53-55); the initial electrochromic composition is deaerated (col. 25, ln. 29-30) to eliminate the dissolved oxygen and air introduced together with the finely dispersed polymer (wherein the office interprets degassing to remove all gases); the closed space between the electrodes is filled with the deaerated initial electrochromic composition (col. 25, ln. 42-43); the closed space between the electrodes is sealed (col. 25, ln. 43-45).

Re claim 2, Tonar et al. further teaches for example, the electrochromic solution comprises an inert electrolyte additionally (col. 7, ln. 57-58).

Re claim 4, Tonar et al. further teaches for example, deaeration of the initial electrochromic composition for eliminating dissolved oxygen and air introduced together with the finely dispersed polymer is performed by evacuation (col. 25, ln. 29-30).

Re claim 5, Tonar et al. further teaches for example, the finely dispersed polymer is taken in an amount that ensures forming a solid-like layer of the electrochromic composition (col. 7, ln. 52-55).

Re claim 6, Tonar et al. further teaches for example, the finely dispersed polymer is a linear polymer (col. 11, ln. 35-38).

Re claim 7, Tonar et al. further teaches for example, the finely dispersed linear polymer is a high-molecular polymer (col. 11, ln. 56-59).

Re claim 8, Tonar et al. further teaches for example, the finely dispersed highly-molecular linear polymer is a copolymer of methyl methacrylate and methacrylic acid (col. 11, ln. 8-13).

Re claim 9, Tonar et al. further teaches for example, the liquid solvent is an individual chemical compound or a mixture of chemical compounds (col. 9, ln. 14-27).

Re claim 10, Tonar et al. further teaches for example, the cathodic component is an individual organic electrochromic compound having at least one reversible volt ampere reduction wave or a mixture of organic electrochromic compounds that has at least one reversible volt ampere reduction wave (col. 8, ln. 66-67, wherein the office interprets the claimed limitations to rely on the physical and chemical properties of the claimed organic compound and furthermore, the office interprets the organic compound of 1,1'-di(3-phenyl(n-propyl))-4,4'-dipyridinium to have the physical and chemical properties as disclosed in the applicant's specification on p. 6, ln. 22-25), and the anodic component is reversible volt an individual organic electrochromic compound having at least one ampere oxidation wave or a mixture of organic electrochromic compounds that has at least one reversible volt ampere oxidation wave (col. 14, ln. 16, wherein the office interprets the claimed limitations to rely on the physical and chemical properties of the claimed organic compound and furthermore, the office interprets the organic compound of ferrocene to have the physical and chemical properties as disclosed in the applicant's specification on p. 7, ln. 8-9).

Re claim 13, Tonar et al. further teaches for example, the cathodic component is a quarternary salt of dipyridinium or its derivatives or a mixture of salts (col. 8, ln. 66-67).

Re claims 14 and 15, Tonar et al. further teaches for example, the anodic compound is a metallocene or ferrocene (col. 14, ln. 16).

Re claim 16, Tonar et al. further teaches for example, the anodic compound is 5,10-dihydro-5,10-dimethylphenazine (col. 14, ln. 16-17).

Re claim 17, Tonar et al. further teaches for example, the dispersion medium is cooled prior to adding the disperse phase (col. 25, ln. 66, wherein the office interprets the pre-polymer solution of example 13A to be at 70 degrees C and col. 26, ln. 22-25, wherein the office interprets the solution to be cooled to room temperature to gel).

Re claims 18 and 19, Tonar et al. further teaches for example, the closed space between the electrodes is deaerated prior to being filled with the initial electrochromic composition (col. 25, ln. 42-43) or is performed by evacuation (col. 25, ln. 42-43).

Re claim 20, Tonar et al. further teaches for example, at least two electrodes (col. 2, ln. 62-63) at least one of them is optically transparent (col. 3, ln. 2-6), and the space between the electrodes (col. 2, ln. 58-60) is tightly sealed (col. 2, ln. 60) and filled with an electrochromic composition (col. 2, ln. 58 and col. 3, ln. 12-14).

Re claim 21, Tonar et al. further teaches for example, the electrochromic composition comprises additionally an UV-stabilizing agent (col. 7, ln. 57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonar et al. (5888431).

Re claims 3, 11 and 12, supra claims 2 and 10, respectively. Furthermore, Tonar et al. further teaches for example, varying the concentration of different constituents (col. 13, ln. 53-67 to col. 14, ln. 1-10).

But, Tonar et al. fails to explicitly teach the electrolyte concentration is 0.005M-0.5M, the concentrations of the cathodic and anodic components are 0.001M-0.2M, or preferably 0.01M-0.1M.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the concentrations of the specified constituents, since it has been held that where the general conditions of a claim are disclosed in the prior art,

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discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Tonar et al. to include the claimed ranges of concentration of the specified constituents in order to provide a free standing gel and sufficient mobility, as taught by Tonar et al. (col. 13, ln. 64-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM 1-17-06


Hung Xuan Dang
Primary Examiner